## **EAST Search History**

## **EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S88	1	"20050174687".pn.	US-PGPUB; USPAT	OR	ON	2009/10/21 13:01
S87	14	("20050094316"   "20060103981"   "4800454"   "4972286"   "5653013"   "5815909"   "6038106"   "6154345"   "6160688"   "6344951"   "6483664"   "6853517"   "6870706"   "6967805"). PN. OR ("7369358"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/21 12:57
S86	22	("5516430"   "5764454"   "5837963"   "6202289"). PN. OR ("6449123"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/21 12:35
S85	6	("4577250"   "5097371"   "5097372"   "5255141"). PN. OR ("6078479"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/21 12:14
S84	1	"20030067718".pn.	US-PGPUB; USPAT	OR	ON	2009/10/20 16:50
S83	47	360/125.38.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 16:17
S82	2	2000-260009	US-PGPUB; USPAT	OR	ON	2009/10/20 15:59
S81	1	10/559704.app. and (intermediate) same substrate	US-PGPUB; USPAT	OR	ON	2009/10/20 15:54
S80	5	(seed buffer under intermediate) near3 (layer film) near3 (sandwich\$3 between middle center interstitial) near3 (opening \$1 hole\$1 expos\$5 pattern \$3 etch\$3) and S79	US-PGPUB; USPAT	OR	ON	2009/10/20 15:39
S79	614	29/603.07.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 15:39

S78	36	(multi\$1 bi tri second two third three) near4 (seed buffer under intermediate) near4 (layer film) near4 (SiO Ta Cu copper Cr chromium tantalum Ni Au Ag Fe Co Ti nickel gold silver iron cobalt titanium metal) near4 (sandwich\$3 between middle center interstitial) near4 (opening \$1 hole\$1 expos\$5 pattern \$3 etch\$3)	US-PGPUB; USPAT	OR	ON	2009/10/20 15:37
S77	1	09/514901.app.	US-PGPUB; USPAT	OR	ON	2009/10/20 15:26
S76	2	S74 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 12:27
S75	0	S74 and (360/125.38- 125.66).ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 12:27
S74	93	(multi\$1 bi tri second two third three) near2 (seed buffer under intermediate) near2 (layer film) with (SiO Ta Cu copper Cr chromium tantalum Ni Au Ag Fe Co Ti nickel gold silver iron cobalt titanium metal) with (between middle center interstitial) with (opening\$1 hole\$1 expos\$5 pattern)	US-PGPUB; USPAT	OR	ON	2009/10/20 12:22
S73	3	S72 and (360/125.38- 125.66).ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 12:21
S72	1575	(base substrate) with ((touch\$3 contact\$3 reach \$3) near2 (seed buffer under intermediate) near2 (layer film))	US-PGPUB; USPAT	OR	ON	2009/10/20 12:17
S71	154	S70 and (360/125.38- 125.66).ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 11:58
S70	100759	(base substrate layer film) with (touch\$3 contact\$3 reach\$3) with (seed buffer under intermediate between middle center interstitial) near2 (layer film)	US-PGPUB; USPAT	OR	ON	2009/10/20 11:44
S69	3	S66 and (360/125.38- 125.66).ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 11:42
S68	65	S66 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 11:41

S67	6	S65 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/20 11:32
S66	777	(multi\$1 bi tri second two third three) near2 (seed buffer under intermediate) near2 (layer film) with (SiO Ta Cu copper Cr chromium tantalum Ni Au Ag Fe Co Ti nickel gold silver iron cobalt titanium metal) with (between middle center interstitial)	US-PGPUB; USPAT	OR	ON	2009/10/20 11:32
<b>S</b> 65	904	(multi\$1 bi tri second two third three) near3 (seed buffer under intermediate) near3 (opening\$1 hole\$1 expos\$5 pattern) near3 (between middle center interstitial)	US-PGPUB; USPAT	OR	ON	2009/10/20 11:32
S64	53	360/125.41.œls.	US-PGPUB; USPAT	OR	ON	2009/10/19 16:33
S63	78	360/125.39.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 16:33
S62	23	360/123.24.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 15:28
S61	20	360/123.45.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 15:28
S60	14	(ceramic aluminum near1 oxide "Al.sub.2O.sub.3") with (base substrate layer film) with ((touch\$3 contact\$3 reach\$3) near2 (seed buffer under intermediate) near2 (layer film))	DERWENT; IBM_TDB	OR	ON	2009/10/19 15:06
S59	5	(ceramic aluminum near1 oxide "Al.sub.2O.sub.3") with (base substrate layer film) with ((touch\$3 contact\$3 reach\$3) near2 (seed buffer under intermediate) near2 (layer film))	FPRS; EPO; JPO	OR	ON	2009/10/19 15:05
S58	66	(ceramic aluminum near1 oxide "Al.sub.2O.sub.3") with (base substrate layer film) with ((touch\$3 contact\$3 reach\$3) near2 (seed buffer under intermediate) near2 (layer film))	US-PGPUB; USPAT	OR	ON	2009/10/19 14:58

S57	1	S54 and S48	US-PGPUB; USPAT	OR	ON	2009/10/19 14:57
S56	15	(MR adj1 sensor transducer spin adj1 valve) and S54	US-PGPUB; USPAT	OR	ON	2009/10/19 14:56
S55	12	S54 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 14:54
S54	319	S30 same S36	US-PGPUB; USPAT	OR	ON	2009/10/19 14:54
S53	7	(MR adj1 sensor transducer spin adj1 valve) same S48	US-PGPUB; USPAT	OR	ON	2009/10/19 14:53
S52	29	(MR adj1 sensor transducer spin adj1 valve) and S48	US-PGPUB; USPAT	OR	ON	2009/10/19 14:53
S51	10	S32 and S48	US-PGPUB; USPAT	OR	ON	2009/10/19 14:36
S50	4	S32 same S48	US-PGPUB; USPAT	OR	ON	2009/10/19 14:29
S49	9	S48 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 14:22
S48	585	(base substrate) near2 (touch\$3 contact\$3 reach \$3) near2 (seed buffer under intermediate) near2 (layer film)	US-PGPUB; USPAT	OR	ON	2009/10/19 14:22
S47	24	S31 and S46	US-PGPUB; USPAT	OR	ON	2009/10/19 12:57
S46	185	S40 and (hitachi).as.	US-PGPUB; USPAT	OR	ON	2009/10/19 12:56
S45	9	S44 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 12:49
S44	155	S40 same S30	US-PGPUB; USPAT	OR	ON	2009/10/19 12:49
S43	126	(neomax).as.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/19 12:34
S42	16	("4775606"   "4796127"   "4814915"   "4879334"   "5448437"   "5480695"   "5609948"   "5670253"   "5949944"   "6256171"   "6329087"   "6417999"   "6551679"   "6572958"   "6666958"   "6686647"). PN. OR ("7203031"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/19 12:32
S41	23	S40 and S30 and S31 and S32	US-PGPUB; USPAT	OR	ON	2009/10/19 12:29

S40	11220	(base substrate) with (touch\$3 contact\$3 reach \$3) with (seed buffer under intermediate) near2 (layer film)	US-PGPUB; USPAT	OR	ON	2009/10/19 12:28
S39	47	360/125.38.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 12:15
S38	12	S37 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 12:00
S37	319	S30 same S36	US-PGPUB; USPAT	OR	ON	2009/10/19 12:00
S36	172050	(seed buffer under intermediate) near3 (opening\$1 hole\$1 expos \$5 pattern)	US-PGPUB; USPAT	OR	ON	2009/10/19 11:54
S35	5	S34 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/19 11:51
S34	82	S30 same S31	US-PGPUB; USPAT	OR	ON	2009/10/19 11:50
S33	3	S30 same S31 same S32	US-PGPUB; USPAT	OR	ON	2009/10/19 11:50
S32	7768	(multi\$1 bi tri second two third three) near2 (seed buffer under intermediate) near3 (opening\$1 hole\$1 expos\$5 pattern)	US-PGPUB; USPAT	OR	ON	2009/10/19 11:47
S31	138090	(ceramic aluminum near1 oxide "Al.sub.2O.sub.3") with (base substrate)	US-PGPUB; USPAT	OR	ON	2009/10/19 11:46
S30	3775	(multi\$1 bi tri second two third three) near2 (seed buffer under intermediate) near2 (layer film) with (SiO Ta Cu copper Cr chromium tantalum Ni Au Ag Fe Co Ti nickel gold silver iron cobalt titanium metal)	US-PGPUB; USPAT	OR	ON	2009/10/19 11:39
S29	1	10/559704.app. and (intermediate)	US-PGPUB; USPAT	OR	ON	2009/10/19 11:25
S28	1	10/559704.app. and (alumin\$4 near2 oxide)	US-PGPUB; USPAT	OR	ON	2009/10/19 10:51
S27	1	10/559704.app. and contact	US-PGPUB; USPAT	OR	ON	2009/10/15 17:20

S26	12	("20030210501"   "20040017640"   "4761699"   "4800454"   "4972286"   "6267903"   "6331924"   "6731476"   "6801402").PN. OR ("6870706").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/10/15 16:58
S25	2	11/068270.app.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:41
S24	1	10/213561.app.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:41
S23	40	S21 and "29"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:40
S22	1	S21 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:40
S21	1588	substrate with (touch\$3 contact\$3 reach\$3) with (metal intermediate underlying seed buffer shield electrode) adj1 (film layer) with (pattern \$4 hole opening) with (charge or static or ESD or electric or surge or shock or electrostatic or discharge or radiation or noise or conductive)	US-PGPUB; USPAT	OR	ON	2009/10/15 16:38
S20	20	("4166574"   "4166574"   "5294812"   "5329090"   "5516430"   "5694677"   "5721651"   "5764454"   "5837963"   "5984190"   "5294812"   "5516430"   "5721651"   "5764454"   "5837963"   "5984190"   "6202289"   "6313436"   "6344892"   "6449123"   "6731373"   "6897010"   "6906895"   "6924090"   "6202289"   "6313436"   "6344892"   "6449123"   "6344892"   "6449123"   "6344892"   "6449123"	US-PGPUB; USPAT	OR	ON	2009/10/15 16:29
S19	16	("4775606"   "4796127"   "4814915"   "4879334"   "5448437"   "5480695"   "5609948"   "5670253"   "5949944"   "6256171"   "6329087"   "6417999"   "6551679"   "6572958"   "6666958"   "6686647"). PN.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:26

S18	21	("20010010612"   "20050264912"   "3799796"   "4454014"   "4681813"   "4713284"   "4796127"   "4814915"   "4849290"   "4902651"   "5165981"   "5595946"   "5595947"   "5609948"   "5645898"   "5657192"   "5734534"   "5936813"   "6034847"   "6198607"   "6277506"   "6277506"). PN.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:25
S17	40	S16 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 16:08
S16	2010	((position\$3 align\$4 identif \$6 data information) near2 (mark pattern tag label number)) with (intermediate metal) adj2 (layer film)	US-PGPUB; USPAT	OR	ON	2009/10/15 15:24
S15	2	S14 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 13:54
S14	355	substrate near4 (touch\$3 contact\$3 reach\$3) near4 (metal intermediate underlying seed buffer shield electrode) adj1 (film layer) with (pattern \$4 hole opening)	US-PGPUB; USPAT	OR	ON	2009/10/15 13:53
S13	46	S12 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 13:52
S12	6698	substrate with (touch\$3 contact\$3 reach\$3) with (metal intermediate underlying seed buffer shield electrode) adj1 (film layer) with (pattern \$4 hole opening)	US-PGPUB; USPAT	OR	ON	2009/10/15 13:51
S11	11	S10 and "360"/\$.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/15 13:48
S10	1380	substrate near3 (touch\$3 contact\$3 reach\$3) near3 (metal intermediate underlying seed buffer shield electrode) adj1 (film layer)	US-PGPUB; USPAT	OR	ON	2009/10/15 13:48

S9	9	("20020008946"   "20020126423"   "20040066575"   "20050024772"   "4796127"   "4814915"   "5729411"   "5901021"   "6277506").PN.	US-PGPUB; USPAT	OR	ON	2009/10/15 12:10
S8	12	((position\$3 align\$4 identif \$6 data information) near2 (mark pattern tag label number)) and (\$6 \$7)	US-PGPUB; USPAT	OR	ON	2009/10/14 13:52
S7	124	360/235.1.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/14 13:52
S6	53	360/235.3.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/14 13:52
<b>S</b> 5	124	360/235.1.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/14 13:27
S4	53	360/235.3.ccls.	US-PGPUB; USPAT	OR	ON	2009/10/14 13:04
S3	2	"2391104" "2359183"	FPRS; EPO	OR	ON	2009/09/21 17:49
S2	1	10/559704.app.	US-PGPUB; USPAT	OR	ON	2009/07/16 12:11
S1	3	(("20020126423") or ("5729411") or ("20020008946")).PN.	US-PGPUB; USPAT	OR	OFF	2009/07/15 17:35

## **EAST Search History (Interference)**

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